

# Mineral Industry Surveys

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## COBALT IN MARCH 2002

U.S. consumption of cobalt in January through March 2002 was 10% lower than that during the first 3 months of 2001, according to the U.S. Geological Survey. The cobalt content of U.S. imports of cobalt metal and chemicals was 3% higher during January through February 2002 than that of imports during the same period in 2001. The cobalt content of U.S. exports of unwrought cobalt and chemicals was 47% lower during January through February 2002 than that during the same period in 2001. Trade data for March 2002 will be available in a subsequent issue.

**Note**

With the exception of prices, all data in this report have been rounded to no more than three significant digits. Totals and percentages were calculated by using unrounded data.

**Price**

Prices for electrolytic cobalt, in dollars per pound, from Platts Metals Week are listed below.

<u>Date</u>	<u>Price range</u>
April 25	7.50-7.90
May 2	7.50-8.50
May 9	7.75-8.75
May 16	8.60-9.00
May 23	8.00-8.50

<u>Month</u>	<u>Average price</u>
April	6.98

TABLE 1  
U.S. REPORTED CONSUMPTION OF COBALT MATERIALS 1/

(Metric tons, contained cobalt)

Period	Metal 2/	Oxide and other chemical compounds 3/	Scrap	Total
2001:				
March	321	143	210	673
April	308	122	209	640
May	298	120	210	627
June	281	147	209	638
July	303	117	209	629
August	283	110	209	602
September	279	137	209	626
October	302	104	209	615
November	312	105	209	627
December	309	112	209	631
January-March r/	920	429	632	1,980
January-December 4/	3,600	1,500	2,520	7,620
2002:				
January	281 r/	97	215 r/	593 r/
February	268 r/	99	215 r/	582 r/
March	277	106	215	599
January-March	826	303	645	1,770

r/ Revised.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ Includes metal powder.

3/ Data may include other cobalt materials.

4/ Data based on monthly reports.

TABLE 2  
U.S. REPORTED CONSUMPTION OF COBALT, BY END USE 1/

(Metric tons, contained cobalt)

End use	2001		2002	
	January-March	January-December 2/	March	January-March 3/
Steel	59 r/	207	18	50
Superalloys	890 r/	3,620	290	869
Magnetic alloys	194	683	47	141
Other alloys 4/	W	W	W	W
Cemented carbides 5/	202 r/	798	63	187
Chemical and ceramic uses 6/	558 r/	2,020	157	454
Miscellaneous and unspecified	78	297	25	73
Total	1,980 r/	7,620	599	1,770

r/ Revised. W Withheld to avoid disclosing company proprietary data; included with "Miscellaneous and unspecified."

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ Data based on monthly reports.

3/ May include revisions to prior months.

4/ Includes nonferrous alloys, welding materials, and wear-resistant alloys.

5/ Includes diamond tool matrices, cemented and sintered carbides, and cast carbide dies or parts.

6/ Includes catalysts, driers in paints or related usage, feed or nutritive additive, glass decolorizer, ground coat frit, pigments, and other uses.

TABLE 3  
U.S. REPORTED STOCKS OF COBALT MATERIALS 1/

(Metric tons, contained cobalt)

Period	Industry 2/				U.S. Government, metal 5/
	Metal 3/	Oxide and other chemical compounds 4/	Scrap	Total	
2001:					
March	335	195	163	693	9,780
April	363	214	163	740	9,120
May	335	211	163	709	8,850
June	300	196	163	659	8,480
July	298	219	163	680	8,420
August	319	236	163	718	8,260
September	313	238	163	713	8,180
October	339	230	162	732	NA
November	325	223	163	711	NA
December 6/	335	212	163	710	NA
2002:					
January	356 r/	245 r/	163	764 r/	NA
February	348	241 r/	162	751	NA
March	320	251	163	734	NA

NA Not available.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ Stocks reported by cobalt processors and consumers.

3/ Includes metal powder.

4/ Data may include other cobalt materials.

5/ Data from Defense National Stockpile Center. Includes material committed for sale pending shipment.

6/ Data based on monthly reports.

TABLE 4  
U.S. IMPORTS FOR CONSUMPTION OF COBALT, BY COUNTRY 1/

(Kilograms, gross weight of material, except as noted)

Period and country of origin	Metals 2/		Oxides and hydroxides		Salts and compounds 3/		Total cobalt content for the month 5/	Cobalt content, year to date 5/ 6/
	Quantity	Value 4/	Quantity	Value 4/	Quantity	Value 4/		
2001:								
February	714,000 7/	\$17,000,000 7/	136,000	\$3,140,000	124,000	\$699,000	843,000	1,560,000
March	615,000	16,700,000	96,400 7/	2,050,000 7/	256,000	1,320,000	753,000	2,310,000
April	679,000	18,600,000	106,000	2,400,000	234,000	1,240,000	817,000	3,130,000
May	836,000 7/	21,100,000 7/	50,600	1,210,000	80,400	518,000	896,000	4,030,000
June	687,000	16,300,000	152,000	2,820,000	84,700	486,000	820,000	4,850,000
July	525,000	12,500,000	119,000	2,090,000	184,000	966,000	658,000	5,500,000
August	646,000	14,300,000	106,000	1,910,000	174,000	872,000	768,000	6,270,000
September	569,000	12,300,000	64,600	1,310,000	198,000	973,000	668,000	6,940,000
October	826,000	16,400,000	91,900	1,760,000	332,000	1,690,000	982,000	7,920,000
November	603,000 7/	10,500,000 7/	81,000	1,330,000	142,000	654,000	700,000	8,620,000
December	553,000	9,200,000	91,900	1,340,000	254,000	1,080,000	689,000	9,310,000
January-December	7,810,000	180,000,000	1,280,000	25,700,000	2,140,000	10,900,000	9,310,000	XX
2002:								
January	729,000 7/	11,500,000 7/	101,000	1,550,000	267,000	1,220,000	877,000	877,000
February:								
Australia	20,000	179,000	--	--	--	--	20,000	20,000
Belgium	79,500	1,370,000	71,200	1,250,000	2,000	16,000	131,000	162,000
Brazil	40,000	627,000	--	--	--	--	40,000	80,000
Canada	65,600	1,120,000	--	--	--	--	65,600	150,000
China	16,000	384,000	--	--	--	--	16,000	38,500
Congo (Kinshasa)	20,000	220,000	--	--	--	--	20,000	80,100
Finland	67,200	1,120,000	66,400	737,000	199,000	701,000	168,000	413,000
France	300	18,900	4,020	125,000	--	--	3,190	6,880
Germany	200	12,000	--	--	--	--	200	747
Japan	1,190	75,700	400	33,300	--	--	1,480	3,510
Korea, Republic of	63	4,010	--	--	--	--	63	198
Morocco	10,000	140,000	--	--	--	--	10,000	14,000
Norway	117,000	1,730,000	--	--	--	--	117,000	297,000
Philippines	--	--	--	--	930	10,300	353	3,350
Russia	111,000	1,760,000	--	--	--	--	111,000	200,000
South Africa	--	--	--	--	--	--	--	77,500
Sweden	2,450	47,600	--	--	--	--	2,450	2,910
Switzerland	--	--	4	3,530	--	--	3	3
Uganda	13,000	203,000	--	--	--	--	13,000	13,000
United Kingdom	250	5,280	6,480	148,000	--	--	4,920	39,400
Total	564,000	9,020,000	148,000	2,300,000	202,000	727,000	725,000	1,600,000

XX Not applicable. -- Zero.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ Unwrought cobalt, excluding alloys; includes cobalt cathode and cobalt metal powder.

3/ Includes cobalt acetates, cobalt carbonates, cobalt chlorides, and cobalt sulfates.

4/ Customs value.

5/ Estimated from gross weights.

6/ May include revisions to prior months.

7/ All or part of these data have been referred to the U.S. Census Bureau for verification.

Source: U.S. Census Bureau, with adjustments by the U.S. Geological Survey.

TABLE 5  
U.S. IMPORTS FOR CONSUMPTION OF ADDITIONAL COBALT MATERIALS, BY COUNTRY 1/

(Kilograms, gross weight of material, except as noted)

Period and country of origin	Unwrought cobalt alloys		Other cobalt: matte, waste and scrap 2/		Wrought cobalt and cobalt articles	
	Quantity	Value 3/	Quantity	Value 3/	Quantity	Value 3/
2001:						
February	4,920	\$116,000	77,200 4/	\$1,620,000 4/	24,900	\$1,380,000
March	4,090	87,100	49,200 4/	381,000 4/	26,700	1,490,000
April	4,250	91,900	67,000	1,550,000	13,100	839,000
May	8,030	193,000	22,600 4/	823,000 4/	25,100	813,000
June	22,200	445,000	67,400 4/	888,000 4/	14,600	980,000
July	6,570	147,000	57,400 4/	537,000 4/	14,500	989,000
August	3,480	64,600	46,400 4/	1,060,000 4/	13,200	845,000
September	1,140	51,500	18,500 4/	515,000 4/	15,400	947,000
October	3,410	105,000	32,000 4/	709,000 4/	19,400	1,170,000
November	10,800	250,000	22,400 4/	519,000 4/	17,000	1,030,000
December	2,130	47,500	49,200 4/	1,010,000 4/	21,800	1,370,000
January-December	73,200	1,670,000	631,000	11,500,000	233,000	13,400,000
2002:						
January	6,990	152,000	73,900 4/	1,170,000 4/	23,000	925,000
February:						
Belgium	257	3,760	1,800	43,800	1,900	86,300
Canada	266	42,800	279	3,410	1,200	233,000
Finland	--	--	2,900	42,600	--	--
France	--	--	2,790	133,000	1,350	65,500
Germany	--	--	2,330	52,800	2,020	99,000
Japan	150	10,700	2,800	79,700	2,060	67,200
Sweden	--	--	50	3,100	--	--
Switzerland	--	--	177	2,160	--	--
United Kingdom	2,980	97,000	2,660	18,900	6,780	381,000
Total	3,650	154,000	15,800	379,000	15,300	932,000

-- Zero.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ Includes other intermediate products of cobalt metallurgy; may include other cobalt-bearing materials from which cobalt is extracted, or from which cobalt-containing chemical compounds are manufactured.

3/ Customs value.

4/ All or part of these data have been referred to the U.S. Census Bureau for verification.

Source: U.S. Census Bureau, with adjustments by the U.S. Geological Survey.

TABLE 6  
U.S. EXPORTS OF COBALT MATERIALS 1/

(Kilograms, gross weight of material, except as noted)

Period	Unwrought cobalt, powders, matte, waste and scrap 2/		Oxides and hydroxides		Salts and compounds 3/		Total cobalt content for the month 5/	Cobalt content, year to date 5/ 6/
	Quantity	Value 4/	Quantity	Value 4/	Quantity	Value 4/		
2001:								
February	216,000	\$6,020,000	131,000	\$823,000	13,200	\$124,000	313,000	557,000
March	166,000	5,700,000	171,000	1,220,000	14,400	90,700	292,000	850,000
April	141,000	4,550,000	210,000	1,530,000	19,500	192,000	298,000	1,150,000
May	220,000	5,590,000	84,200	654,000	26,100	209,000	287,000	1,430,000
June	204,000	5,460,000	116,000 7/	1,070,000 7/	39,000	334,000	297,000	1,730,000
July	146,000	3,960,000	211,000 7/	1,160,000 7/	30,000	231,000	306,000	2,040,000
August	189,000	5,270,000	27,400 7/	241,000 7/	29,800	173,000	216,000	2,250,000
September	186,000	4,730,000	32,100	473,000	3,030	27,100	210,000	2,460,000
October	184,000	5,100,000	6,530	155,000	35,400	221,000	197,000	2,660,000
November	306,000	4,520,000	41,600	581,000	7,770	34,300	338,000	3,000,000
December	182,000	3,220,000	32,500	701,000	9,110	77,100	207,000	3,210,000
January-December	2,230,000	57,300,000	1,260,000	10,200,000	254,000	1,980,000	3,210,000	XX
2002:								
January	127,000	2,870,000	25,600	379,000	14,100	98,500	149,000	149,000
February	140,000	2,850,000	6,090	88,100	13,400	85,300	148,000	297,000

XX Not applicable.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ May include other intermediate products of cobalt metallurgy, and unwrought cobalt alloys.

3/ Cobalt acetates and cobalt chlorides.

4/ Free alongside ship (f.a.s.) value.

5/ Estimated from gross weights.

6/ Year to date may include revisions to prior months.

7/ All or part of these data have been referred to the U.S. Census Bureau for verification.

Source: U.S. Census Bureau, with adjustments by the U.S. Geological Survey.

TABLE 7  
U.S. EXPORTS OF WROUGHT COBALT, COBALT ORE, AND CONCENTRATES 1/

(Kilograms, gross weight of material, except as noted)

Period	Wrought cobalt and cobalt articles		Cobalt ore and concentrates	
	Quantity	Value 2/	Quantity	Value 2/
2001:				
February	89,000	\$2,070,000	--	--
March	118,000	3,040,000	75,200 3/	\$477,000 3/
April	55,000	1,860,000	95,000 3/	677,000 3/
May	44,100	2,250,000	23,200 3/	54,900 3/
June	31,300	2,200,000	95,800 3/	63,100 3/
July	73,800	2,040,000	78,300 3/	342,000 3/
August	66,400	2,320,000	21,400 3/	321,000 3/
September	50,700	1,990,000	71,500 3/	446,000 3/
October	30,600	1,250,000	19,400 3/	411,000 3/
November	42,600	1,960,000	2,400 3/	58,700 3/
December	82,300	2,710,000	2,330 3/	72,000 3/
January-December	741,000	25,500,000	527,000	3,090,000
2002:				
January	46,000	1,720,000	237,000 3/	776,000 3/
February	136,000	3,070,000	2,900 3/	85,000 3/

-- Zero.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ Free alongside ship (f.a.s.) value.

3/ All or part of these data have been referred to the U.S. Census Bureau for verification.

Source: U.S. Census Bureau, with adjustments by the U.S. Geological Survey.